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1 Triple product wavelet integrals for all-frequency relighting
⬥ Ren Ng, Ravi Ramamoorthi, Pat Hanrahan
August 2004   **SIGGRAPH '04:** SIGGRAPH 2004 Papers
Publisher: ACM 📄 Request Permissions
Full text available: ⊙ Mov (25:51 MIN), 📄 Pdf (365.55 KB) Additional Information: full citation, abstract, references, cited by, index terms

Bibliometrics: Downloads (6 Weeks): 10, Downloads (12 Months): 101, Downloads (Overall): 1054, Citation Count: 46

This paper focuses on efficient rendering based on pre-computed light transport, with realistic materials and shadows under all-frequency direct lighting such an environment maps. The basic difficulty is representation and computation in the 6D space ...

Keywords: Haar Wavelets, Image-Based Rendering, Non-linear Approximation, Pre-computed Radiance Transfer, Relighting

Also published in:
August 2004 **Transactions on Graphics (TOG)** Volume 23 Issue 3

2 Real-time shadowing techniques
⬥ Tomas Akenine-Moeller, Eric Chan, Wolfgang Heidrich, Jan Kautz, Mark Kilgard, Marc Stamminger
August 2004   **SIGGRAPH '04:** SIGGRAPH 2004 Course Notes
Publisher: ACM 📄 Request Permissions
Full text available: 📄 Pdf (11.17 MB)   Additional Information: full citation, abstract, cited by

Bibliometrics: Downloads (6 Weeks): 22, Downloads (12 Months): 154, Downloads (Overall): 1344, Citation Count: 2

Shadows heighten realism and provide important visual cues about the spatial relationships between objects. But integration of robust shadow shadowing techniques in real-time rendering is not an easy task. In this course on how shadows are incorporated ...

3 A survey of methods for recovering quadrics in triangle meshes
⬥ Sylvain Petitjean
June 2002   **Computing Surveys (CSUR)** , Volume 34 Issue 2
Publisher: ACM 📄 Request Permissions
Full text available: 📄 Pdf (3.91 MB)   Additional Information: full citation, abstract, references, cited by, index terms

Bibliometrics: Downloads (6 Weeks): 46, Downloads (12 Months): 266, Downloads (Overall): 2855, Citation Count: 22

In a variety of practical situations such as reverse engineering of boundary representation from depth maps of scanned objects, range data analysis, model-based recognition and algebraic surface design, there is a need to recover the shape of visible ...

Keywords: Data fitting, geometry enhancement, local geometry estimation, mesh fairing, shape recovery

4 Interactive sound rendering
⬥ Dinesh Manocha, Paul Calamia, Ming C. Lin, Dinesh Manocha, Lauri Savioja, Nicolas Tsingos
August 2009   **SIGGRAPH '09:** SIGGRAPH 2009 Courses
Publisher: ACM
Full text available: 📄 Pdf (62.61 MB)   Additional Information: full citation, abstract, references, index terms

Bibliometrics: Downloads (6 Weeks): 131, Downloads (12 Months): 541, Downloads (Overall): 541, Citation Count: 0

An overview of algorithmic and software technologies related to interactive sound rendering. The course lectures cover three main topics: physically based techniques to synthesize sounds generated from colliding objects or liquid sounds, efficient computation ...

5 Queue: Volume 6 Issue 2
⬥ March 2008   Queue
Publisher: ACM
Full text available: 📄 Digital Edition , 📄 Pdf (7.96 MB) Additional Information: full citation, index terms

Bibliometrics: Downloads (6 Weeks): 16, Downloads (12 Months): 16, Downloads (Overall): 486, Citation Count: 0

6 Object-based and image-based object representations

June 2004 **Computing Surveys (CSUR)** , Volume 36 Issue 2
Publisher: ACM Request Permissions
Full text available: Pdf (1.05 MB)   Additional Information: full citation, abstract, references, index terms

Bibliometrics: Downloads (6 Weeks): 27, Downloads (12 Months): 273, Downloads (Overall): 3533, Citation Count: 0

An overview is presented of object-based and image-based representations of objects by their interiors. The representations are distinguished by the manner in which they can be used to answer two fundamental queries in database applications: (1) Feature ...

Keywords: Access methods, R-trees, feature query, geographic information systems (GIS), image space, location query, object space, octrees, pyramids, quadtrees, space-filling curves, spatial databases

7 Refereeing conflicts in hardware transactional memory
Arrvindh Shriraman, Sandhya Dwarkadas
June 2009 **ICS '09**: Proceedings of the 23rd international conference on Supercomputing
Publisher: ACM Request Permissions
Full text available: Pdf (937.14 KB)   Additional Information: full citation, abstract, references, index terms

Bibliometrics: Downloads (6 Weeks): 3, Downloads (12 Months): 95, Downloads (Overall): 108, Citation Count: 1

In the search for high performance, most transactional memory (TM) systems execute atomic blocks concurrently and must thus be prepared for data conflicts. The TM system also needs to choose a policy to decide when and how to manage the resulting contention. ...

Keywords: conflict detection, contention management, transactional memory

8 Pareto-optimal formulations for cost versus colorimetric accuracy trade-offs in printer color management
D. J. Littlewood, P. A. Drakopoulos, G. Subbarayan
April 2002 **Transactions on Graphics (TOG)** , Volume 21 Issue 2
Publisher: ACM Request Permissions
Full text available: Pdf (9.84 MB)   Additional Information: full citation, abstract, references, index terms

Bibliometrics: Downloads (6 Weeks): 3, Downloads (12 Months): 72, Downloads (Overall): 920, Citation Count: 0

Color management for the printing of digital images is a challenging task, due primarily to nonlinear ink-mixing behavior and the presence of redundant solutions for print devices with more than three inks. Algorithms for the conversion of image data ...

Keywords: Artificial Neural Networks, CMYK, Color Conversion, Color Fidelity, Color Management, Color Matching, Color Printing, Color Space Transformation, Optimization, Pareto-optimization, Tetrahedral Interpolation

9 A perceptual approach to trimming and tuning unstructured lumigraphs
Yann Morvan, Carol O'sullivan
January 2009 **Transactions on Applied Perception (TAP)** , Volume 5 Issue 4
Publisher: ACM Request Permissions
Full text available: Pdf (7.54 MB)   Additional Information: full citation, abstract, references, index terms

Bibliometrics: Downloads (6 Weeks): 8, Downloads (12 Months): 49, Downloads (Overall): 92, Citation Count: 0

We present a novel perceptual method to reduce the visual redundancy of unstructured lumigraphs, an image based representation designed for interactive rendering. We combine features of the unstructured lumigraph algorithm and image fidelity metrics ...

Keywords: Image-based rendering, perceptual metrics

10 Communications of the ACM: Volume 52 Issue 10
October 2009 Communications of the ACM
Publisher: ACM
Full text available: Digital Edition , Pdf (7.38 MB) Additional Information: full citation, index terms

Bibliometrics: Downloads (6 Weeks): 310, Downloads (12 Months): 310, Downloads (Overall): 310, Citation Count: 0

11 Face recognition: A literature survey
W. Zhao, R. Chellappa, P. J. Phillips, A. Rosenfeld
December 2003 **Computing Surveys (CSUR)** , Volume 35 Issue 4
Publisher: ACM Request Permissions
Full text available: Pdf (4.28 MB)   Additional Information: full citation, abstract, references, cited by, index terms

Bibliometrics: Downloads (6 Weeks): 428, Downloads (12 Months): 3686, Downloads (Overall): 25673, Citation Count: 289

As one of the most successful applications of image analysis and understanding, face recognition has recently received significant attention, especially during the past several years. At least two reasons account for this trend: the first is the wide ...

Keywords: Face recognition, person identification

12 Build your own 3D scanner: 3D photography for beginners

Douglas Lanman, Gabriel Taubin

August 2009   **SIGGRAPH '09**: SIGGRAPH 2009 Courses

Publisher: ACM

Full text available: Pdf (16.90 MB)   Additional Information: full citation, abstract, references, cited by, index terms

Bibliometrics: Downloads (6 Weeks): 70,   Downloads (12 Months): 281,   Downloads (Overall): 281,   Citation Count: 1

Over the last decade, digital photography has entered the mainstream with inexpensive, miniaturized cameras for consumer use. Digital projection is poised to make a similar breakthrough, with a variety of vendors offering small, low-cost projectors. ...

13 Video-based rendering

Marcus Magnor, Marc Pollefeys, German Cheung, Wojciech Matusik, Christian Theobalt

July 2005   **SIGGRAPH '05**: SIGGRAPH 2005 Courses

Publisher: ACM Request Permissions

Full text available: Pdf (5.15 MB)   Additional Information: full citation

Bibliometrics: Downloads (6 Weeks): 24,   Downloads (12 Months): 161,   Downloads (Overall): 902,   Citation Count: 2

14 Strands and hair: modeling, animation, and rendering

Sunil Hadap, Marie-Paule Cani, Ming Lin, Tae-Yong Kim, Florence Bertails, Steve Marschner, Kelly Ward, Zoran Kačić-Alesi

August 2007   **SIGGRAPH '07**: SIGGRAPH 2007 courses

Publisher: ACM Request Permissions

Full text available: Pdf (8.52 MB)   Additional Information: full citation, abstract, references

Bibliometrics: Downloads (6 Weeks): 26,   Downloads (12 Months): 244,   Downloads (Overall): 1366,   Citation Count: 3

The last six years has seen a renaissance in hair modeling, rendering and animation. This course covers the gamut of hair simulation problems and present working solutions, from recent and novel research ideas to time tested industrial practices that ...

15 Surf's up: the making of an animated documentary

Rob Bredow, David Schaub, Daniel Kramer, Matthew Hausman, Danny Dimian, R. Stirling Duguid

August 2007   **SIGGRAPH '07**: SIGGRAPH 2007 courses

Publisher: ACM Request Permissions

Full text available: Pdf (152.86 MB)   Additional Information: full citation, abstract

Bibliometrics: Downloads (6 Weeks): 19,   Downloads (12 Months): 259,   Downloads (Overall): 1272,   Citation Count: 1

The CG animated documentary *Surf's Up* called for unique production techniques to be leveraged throughout the creation of the film. This half day course presents an in-depth look at several of the key aspects of the production: • Integration ...

16 GPGPU: general purpose computation on graphics hardware

David Luebke, Mark Harris, Jens Krüger, Tim Purcell, Naga Govindaraju, Ian Buck, Cliff Woolley, Aaron Lefohn

August 2004   **SIGGRAPH '04**: SIGGRAPH 2004 Course Notes

Publisher: ACM Request Permissions

Full text available: Pdf (63.03 MB)   Additional Information: full citation, abstract, cited by

Bibliometrics: Downloads (6 Weeks): 104,   Downloads (12 Months): 1292,   Downloads (Overall): 7078,   Citation Count: 18

The graphics processor (GPU) on today's commodity video cards has evolved into an extremely powerful and flexible processor. The latest graphics architectures provide tremendous memory bandwidth and computational horsepower, with fully programmable vertex ...

17 Multiresolution green's function methods for interactive simulation of large-scale elastostatic objects

Doug L. James, Dinesh K. Pai

January 2003 **Transactions on Graphics (TOG)** , Volume 22 Issue 1

Publisher: ACM Request Permissions

Full text available: Pdf (8.69 MB)   Additional Information: full citation, abstract, references, cited by, index terms

Bibliometrics: Downloads (6 Weeks): 6,   Downloads (12 Months): 114,   Downloads (Overall): 1362,   Citation Count: 11

We present a framework for low-latency interactive simulation of linear elastostatic models, and other systems arising from linear elliptic partial differential equations, which makes it feasible to interactively simulate large-scale physical models. ...

Keywords: Capacitance matrix, Green's function, deformation, elastostatic, fast summation, force feedback, interactive real-time applications, lifting scheme, real-time, updating, wavelets

18 Interactive multiresolution surface viewing

Andrew Certain, Jovan Popovic, Tony DeRose, Tom Duchamp, David Salesin, Werner Stuetzle

August 1996   **SIGGRAPH '96**: Proceedings of the 23rd annual conference on Computer graphics and interactive techniques

Publisher: ACM Request Permissions

Full text available: Pdf (420.60 KB)   Additional Information: full citation, references, cited by, index terms

Bibliometrics: Downloads (6 Weeks): 1,   Downloads (12 Months): 28,   Downloads (Overall): 368,   Citation Count: 36

Keywords: geometric modeling, multiresolution analysis, texture mapping, viewer, wavelets

19 Collision detection and proximity queries

Sunil Hadap, Dave Eberle, Pascal Volino, Ming C. Lin, Stephane Redon, Christer Ericson
August 2004   **SIGGRAPH '04**: SIGGRAPH 2004 Course Notes

Publisher: ACM Request Permissions
Full text available: Pdf (11.22 MB)   Additional Information: full citation, abstract

Bibliometrics: Downloads (6 Weeks): 48,   Downloads (12 Months): 502,   Downloads (Overall): 3498,   Citation Count: 4

This course will primarily cover widely accepted and proved methodologies in collision detection. In addition more advanced or recent topics such as continuous collision detection, ADFs, and using graphics hardware will be introduced. When appropriate ...

20 As-rigid-as-possible shape manipulation

Takeo Igarashi, Tomer Moscovich, John F. Hughes
July 2005   **SIGGRAPH '05**: SIGGRAPH 2005 Papers

Publisher: ACM Request Permissions
Full text available: Mov (24:52 MIN), Pdf (664.83 KB) Additional Information: full citation, abstract, references, cited by, index terms

Bibliometrics: Downloads (6 Weeks): 22,   Downloads (12 Months): 295,   Downloads (Overall): 1477,   Citation Count: 52

We present an interactive system that lets a user move and deform a two-dimensional shape without manually establishing a skeleton or freeform deformation (FFD) domain beforehand. The shape is represented by a triangle mesh and the user moves several ...

Keywords: animation, deformation, image editing, interaction, mesh editing, shape manipulation

Also published in:
July 2005 **Transactions on Graphics (TOG)** Volume 24 Issue 3

Searching within **The ACM Digital Library** with **Advanced Search**: (window and field and object and vertex and mesh and desktop) and (property or properties or attribute or attributes) (start a new search)

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1 Interactive sound rendering
Dinesh Manocha, Paul Calamia, Ming C. Lin, Dinesh Manocha, Lauri Savioja, Nicolas Tsingos
August 2009   **SIGGRAPH '09**: SIGGRAPH 2009 Courses
Publisher: ACM
Full text available: 📄 Pdf (62.61 MB)   Additional Information: full citation, abstract, references, index terms
Bibliometrics: Downloads (6 Weeks): 131, Downloads (12 Months): 541, Downloads (Overall): 541, Citation Count: 0

An overview of algorithmic and software technologies related to interactive sound rendering. The course lectures cover three main topics: physically based techniques to synthesize sounds generated from colliding objects or liquid sounds, efficient computation ...

2 Queue, Volume 6 Issue 2
March 2008   Queue
Publisher: ACM
Full text available: 📄 Digital Edition , 📄 Pdf (7.96 MB) Additional Information: full citation, index terms
Bibliometrics: Downloads (6 Weeks): 16, Downloads (12 Months): 16, Downloads (Overall): 486, Citation Count: 0

3 Pareto-optimal formulations for cost versus colorimetric accuracy trade-offs in printer color management
D. J. Littlewood, P. A. Drakopoulos, G. Subbarayan
April 2002   **Transactions on Graphics (TOG)** , Volume 21 Issue 2
Publisher: ACM 🔖 Request Permissions
Full text available: 📄 Pdf (9.84 MB)   Additional Information: full citation, abstract, references, index terms
Bibliometrics: Downloads (6 Weeks): 3, Downloads (12 Months): 72, Downloads (Overall): 920, Citation Count: 0

Color management for the printing of digital images is a challenging task, due primarily to nonlinear ink-mixing behavior and the presence of redundant solutions for print devices with more than three inks. Algorithms for the conversion of image data ...

Keywords: Artificial Neural Networks, CMYK, Color Conversion, Color Fidelity, Color Management, Color Matching, Color Printing, Color Space Transformation, Optimization, Pareto-optimization, Tetrahedral Interpolation

4 A perceptual approach to trimming and tuning unstructured lumigraphs
Yann Morvan, Carol O'Sullivan
January 2009   **Transactions on Applied Perception (TAP)** , Volume 5 Issue 4
Publisher: ACM 🔖 Request Permissions
Full text available: 📄 Pdf (7.54 MB)   Additional Information: full citation, abstract, references, index terms
Bibliometrics: Downloads (6 Weeks): 8, Downloads (12 Months): 49, Downloads (Overall): 92, Citation Count: 0

We present a novel perceptual method to reduce the visual redundancy of unstructured lumigraphs, an image based representation designed for interactive rendering. We combine features of the unstructured lumigraph algorithm and image fidelity metrics ...

Keywords: Image-based rendering, perceptual metrics

5 Fast proximity computation among deformable models using discrete Voronoi diagrams
Avneesh Sud, Naga Govindaraju, Russell Gayle, Ilknur Kabul, Dinesh Manocha
July 2006   **SIGGRAPH '06**: SIGGRAPH 2006 Papers
Publisher: ACM 🔖 Request Permissions
Full text available: 🎬 Mov (20:20 MIN), 📄 Pdf (413.90 KB) Additional Information: full citation, abstract, references, cited by, index terms
Bibliometrics: Downloads (6 Weeks): 15, Downloads (12 Months): 116, Downloads (Overall): 772, Citation Count: 8

We present novel algorithms to perform collision and distance queries among multiple deformable models in dynamic environments. These include inter-object queries between different objects as well as intra-object queries. We describe a unified approach ...

Keywords: N-body queries, deformable collisions, distance fields, penetration computation, self-collisions

Also published in:
  July 2006 **Transactions on Graphics (TOG)** Volume 25 Issue 3

6 Communications of the ACM: Volume 52 Issue 10
October 2009 Communications of the ACM
Publisher: ACM
Full text available: 📄 Digital Edition , 📄 Pdf (7.38 MB) Additional Information: full citation, index terms
Bibliometrics: Downloads (6 Weeks): 310, Downloads (12 Months): 310, Downloads (Overall): 310, Citation Count: 0

7 Face recognition: A literature survey
W. Zhao, R. Chellappa, P. J. Phillips, A. Rosenfeld
December 2003 **Computing Surveys (CSUR)** , Volume 35 Issue 4

Publisher: ACM ✣ Request Permissions
Full text available: 📄 Pdf (4.28 MB)   Additional Information: full citation, abstract, references, cited by, index terms

Bibliometrics: Downloads (6 Weeks): 428, Downloads (12 Months): 3686, Downloads (Overall): 25673, Citation Count: 289

As one of the most successful applications of image analysis and understanding, face recognition has recently received significant attention, especially during the past several years. At least two reasons account for this trend: the first is the wide ...

Keywords: Face recognition, person identification

8 DVR-Pompei: a 3D information system for the house of the Vettii in openGL environment
Maurizio Forte, Eva Pietroni, Claudio Rufa, Angela Bizzarro, Alessandro Tilia, Stefano Tilia
November 2001 **VAST '01:** Proceedings of the 2001 conference on Virtual reality, archeology, and cultural heritage
Publisher: ACM
Full text available: 📄 Pdf (11.24 MB)   Additional Information: full citation, abstract, references, cited by, index terms

Bibliometrics: Downloads (6 Weeks): 3, Downloads (12 Months): 40, Downloads (Overall): 545, Citation Count: 2

DVR *(Desktop Virtual Reality)* Pompei project is aimed to the creation of a virtual reality desktop system able to connect and to visualize data and spatial models in the same environment, interface and three-dimensional context of interaction. ...

Keywords: 3D information systems, archaeometry, desktop virtual reality, house of the vettii, pompei, restoration, spatial data

9 Build your own 3D scanner: 3D photography for beginners
Douglas Lanman, Gabriel Taubin
August 2009   **SIGGRAPH '09:** SIGGRAPH 2009 Courses
Publisher: ACM
Full text available: 📄 Pdf (16.90 MB)   Additional Information: full citation, abstract, references, cited by, index terms

Bibliometrics: Downloads (6 Weeks): 70, Downloads (12 Months): 281, Downloads (Overall): 281, Citation Count: 1

Over the last decade, digital photography has entered the mainstream with inexpensive, miniaturized cameras for consumer use. Digital projection is poised to make a similar breakthrough, with a variety of vendors offering small, low-cost projectors. ...

10 Video-based rendering
Marcus Magnor, Marc Pollefeys, German Cheung, Wojciech Matusik, Christian Theobalt
July 2005   **SIGGRAPH '05:** SIGGRAPH 2005 Courses
Publisher: ACM ✣ Request Permissions
Full text available: 📄 Pdf (5.15 MB)   Additional Information: full citation

Bibliometrics: Downloads (6 Weeks): 24, Downloads (12 Months): 161, Downloads (Overall): 902, Citation Count: 2

11 Strands and hair: modeling, animation, and rendering
Sunil Hadap, Marie-Paule Cani, Ming Lin, Tae-Yong Kim, Florence Bertails, Steve Marschner, Kelly Ward, Zoran Kačić-Alesić
August 2007   **SIGGRAPH '07:** SIGGRAPH 2007 courses
Publisher: ACM ✣ Request Permissions
Full text available: 📄 Pdf (8.52 MB)   Additional Information: full citation, abstract, references

Bibliometrics: Downloads (6 Weeks): 26, Downloads (12 Months): 244, Downloads (Overall): 1366, Citation Count: 3

The last six years has seen a renaissance in hair modeling, rendering and animation. This course covers the gamut of hair simulation problems and present working solutions, from recent and novel research ideas to time tested industrial practices that ...

12 Superimposing pictorial artwork with projected imagery
Oliver Bimber, Franz Coriand, Alexander Kleppe, Erich Bruns, Stefanie Zollmann, Tobias Langlotz
July 2005   **SIGGRAPH '05:** SIGGRAPH 2005 Courses
Publisher: ACM ✣ Request Permissions
Full text available: 📄 Pdf (2.36 MB)   Additional Information: full citation, abstract, references

Bibliometrics: Downloads (6 Weeks): 3, Downloads (12 Months): 36, Downloads (Overall): 193, Citation Count: 0

We present a novel approach for using pictorial artwork as information displays and show how to combine almost any kind of computergenerated visual information directly with the painted content.

13 Visualizing Hurricane Katrina: large data management, rendering and display challenges
Shalini Venkataraman, Werner Benger, Amanda Long, Byungil Jeong, Luc Renambot
November 2006 **GRAPHITE '06:** Proceedings of the 4th international conference on Computer graphics and interactive techniques in Australasia and Southeast Asia
Publisher: ACM
Full text available: 📄 Pdf (568.64 KB)   Additional Information: full citation, abstract, references, index terms

Bibliometrics: Downloads (6 Weeks): 6, Downloads (12 Months): 62, Downloads (Overall): 285, Citation Count: 0

The onslaught of Hurricane Katrina has highlighted the need for effective information display. Visualization of geoscientific data faces challenges of size, integration and representation. Rendering methods need to cope with the surge of data due to ...

Keywords: geovisualization, scalable displays, scientific data management, scientific visualization

14 GPGPU: general purpose computation on graphics hardware
David Luebke, Mark Harris, Jens Krüger, Tim Purcell, Naga Govindaraju, Ian Buck, Cliff Woolley, Aaron Lefohn
August 2004   **SIGGRAPH '04:** SIGGRAPH 2004 Course Notes
Publisher: ACM ✣ Request Permissions
Full text available: 📄 Pdf (63.03 MB)   Additional Information: full citation, abstract, cited by

Bibliometrics: Downloads (6 Weeks): 104, Downloads (12 Months): 1292, Downloads (Overall): 7078, Citation Count: 18

The graphics processor (GPU) on today's commodity video cards has evolved into an extremely powerful and flexible processor. The latest graphics architectures provide tremendous memory bandwidth and computational horsepower, with fully programmable vertex ...

15 Equalizer: a scalable parallel rendering framework
Stefan Eilemann, Maxim Makhinya, Renato Pajarola
December 2008 **SIGGRAPH Asia '08:** SIGGRAPH ASIA 2008 courses
Publisher: ACM Request Permissions
Full text available: Pdf (13.86 MB)   Additional Information: full citation, abstract, references, index terms

Bibliometrics: Downloads (6 Weeks): 12, Downloads (12 Months): 147, Downloads (Overall): 218, Citation Count: 0

Continuing improvements in CPU and GPU performances as well as increasing multi-core processor and cluster-based parallelism demand for flexible and scalable parallel rendering solutions that can exploit multipipe hardware accelerated graphics. In fact, ...

Keywords: cluster graphics, display walls, immersive environments, parallel rendering, scalable visualization

16 Collision Detection and Force Response in Highly-Detailed Point-Based Hapto-Visual Virtual Environments
Naim R. El-Far, Nicolas D. Georganas, Abdulmotaleb El Saddik
October 2007 **DS-RT '07:** Proceedings of the 11th IEEE International Symposium on Distributed Simulation and Real-Time Applications
Publisher: IEEE Computer Society
Full text available: Pdf (326.38 KB)   Additional Information: full citation, abstract, references, index terms

Bibliometrics: Downloads (6 Weeks): 5, Downloads (12 Months): 72, Downloads (Overall): 181, Citation Count: 0

In this paper, we present a collision detection algorithm and a force response algorithm both for use in dynamic, rigid-bodied, highly-detailed, hapto-visual virtual environments in which the models' geometry is point-based. Our collision detection algorithm ...

17 Collision detection and proximity queries
Sunil Hadap, Dave Eberle, Pascal Volino, Ming C. Lin, Stephane Redon, Christer Ericson
August 2004 **SIGGRAPH '04:** SIGGRAPH 2004 Course Notes
Publisher: ACM Request Permissions
Full text available: Pdf (11.22 MB)   Additional Information: full citation, abstract

Bibliometrics: Downloads (6 Weeks): 48, Downloads (12 Months): 502, Downloads (Overall): 3498, Citation Count: 4

This course will primarily cover widely accepted and proved methodologies in collision detection. In addition more advanced or recent topics such as continuous collision detection, ADFs, and using graphics hardware will be introduced. When appropriate ...

18 Class notes: don't be a WIMP: (http://www.not-for-wimps.org)
Johannes Behr, Dirk Reiners
August 2008 **SIGGRAPH '08:** SIGGRAPH 2008 classes
Publisher: ACM Request Permissions
Full text available: Flv (93:37 MIN), Mov (93:28 MIN), Pdf (6.40 MB) Additional Information: full citation, abstract, references, index terms

Bibliometrics: Downloads (6 Weeks): 20, Downloads (12 Months): 250, Downloads (Overall): 656, Citation Count: 0

Virtual and augmented reality have been around for a long time, but for most people they are movie fantasies. Very few people outside a few research labs have worked with or experienced these systems for themselves. On the other hand, interactive 3D ...

19 QSplat: a multiresolution point rendering system for large meshes
Szymon Rusinkiewicz, Marc Levoy
July 2000 **SIGGRAPH '00:** Proceedings of the 27th annual conference on Computer graphics and interactive techniques
Publisher: ACM Press/Addison-Wesley Publishing Co. Request Permissions
Full text available: Pdf (3.27 MB)   Additional Information: full citation, abstract, references, cited by, index terms

Bibliometrics: Downloads (6 Weeks): 19, Downloads (12 Months): 162, Downloads (Overall): 1405, Citation Count: 197

Advances in 3D scanning technologies have enabled the practical creation of meshes with hundreds of millions of polygons. Traditional algorithms for display, simplification, and progressive transmission of meshes are impractical for data sets of this ...

Keywords: compression algorithms, level of detail algorithms, rendering systems, spatial data structures

20 A Java3D framework for inspecting and segmenting 3D models
Leila De Floriani, Laura Papaleo, Nicolò Carissimi
August 2008 **Web3D '08:** Proceedings of the 13th international symposium on 3D web technology
Publisher: ACM Request Permissions
Full text available: Pdf (3.46 MB)   Additional Information: full citation, abstract, references, index terms

Bibliometrics: Downloads (6 Weeks): 11, Downloads (12 Months): 83, Downloads (Overall): 237, Citation Count: 0

Models of 3D objects have become widely accessible in several disciplines within academia and industry, spanning from scientific visualization to entertainment. In the last few years, 3D models are often organized into digital libraries accessible over ...

Keywords: Java3D, X3D, object manipulation, object segmentation, shape semantics

Search History For This Session

- (desktop AND window AND field AND mesh AND (vertex OR vertices) AND object AND (property OR properties OR attribute OR attributes)) (223890)